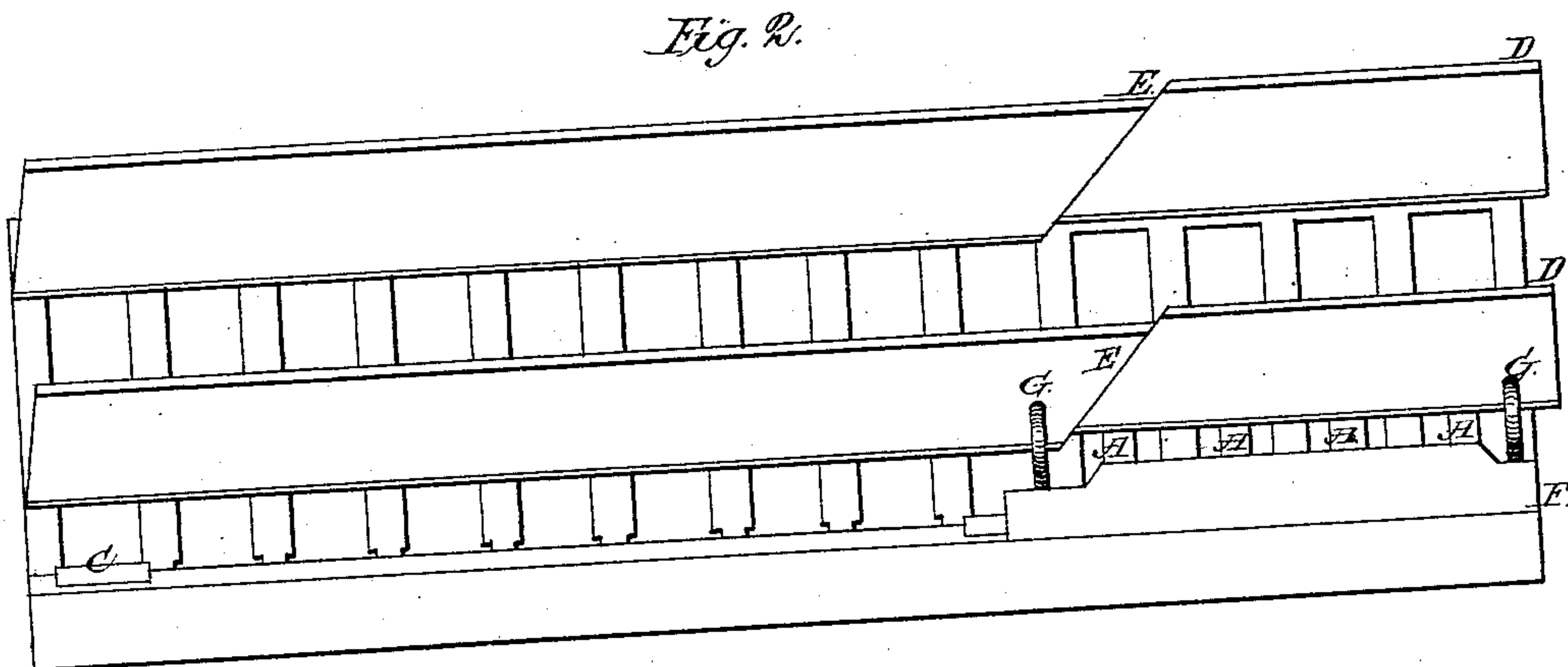
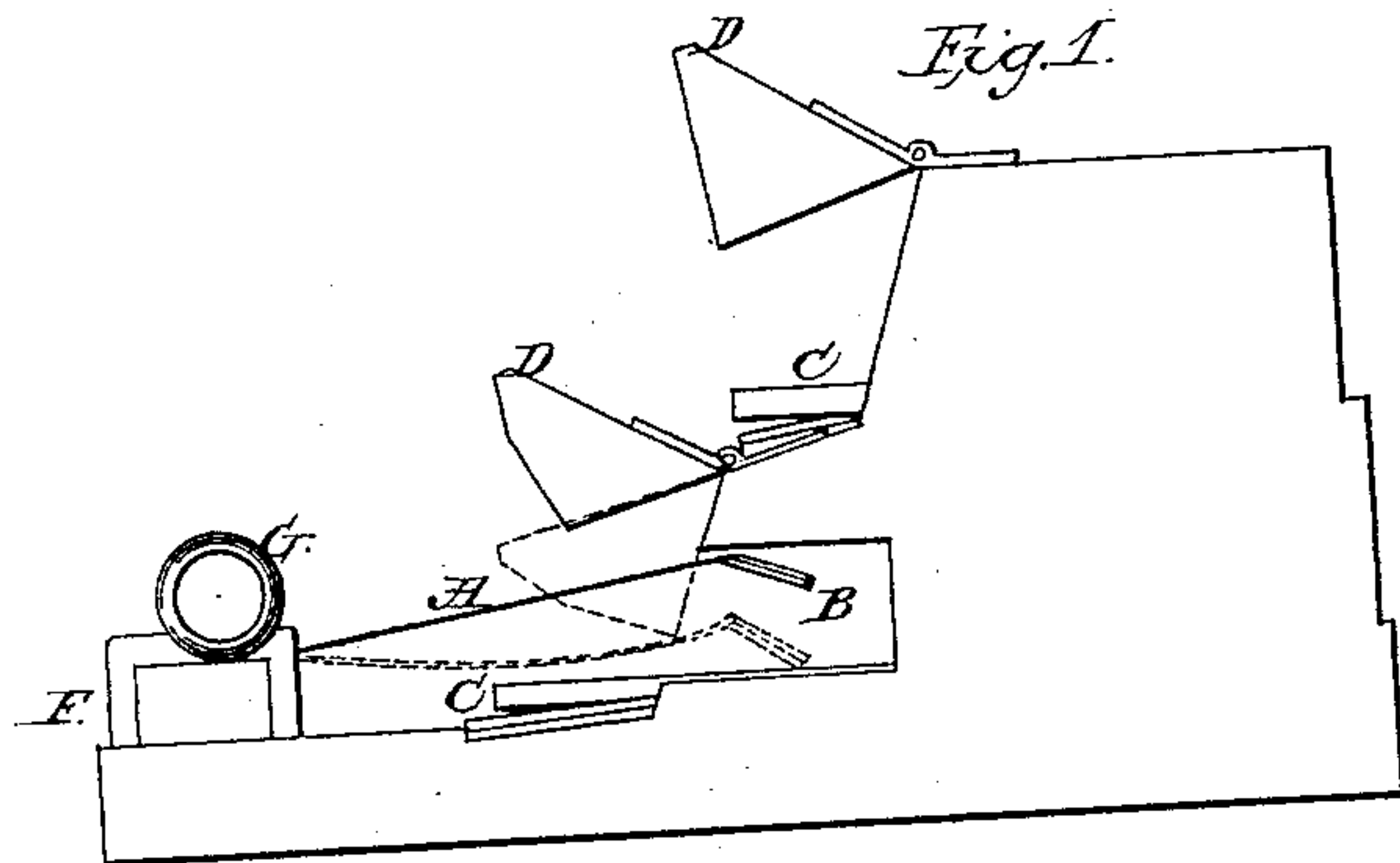


J. A. WARREN & C. W. COOLIDGE.  
Reed Organ.

No. 208,775.

Patented Oct. 8, 1878.



Witnesses:

J. E. Richardson.  
James Heid.

Inventors:

J. A. Warren.  
C. W. Coolidge.

# UNITED STATES PATENT OFFICE.

JOSEPH A. WARREN AND CLINTON W. COOLIDGE, OF DETROIT, MICHIGAN.

## IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **208,775**, dated October 8, 1878; application filed March 26, 1878.

*To all whom it may concern:*

Be it known that we, JOSEPH A. WARREN and CLINTON W. COOLIDGE, both of the city of Detroit, county of Wayne, and State of Michigan, have invented a new and useful Improvement in Reed-Organs, of which the following is a description:

Our invention relates to reed-organs; and it consists in an improved mute to effectually prevent the upper reeds from speaking when the stop-valve is closed; also, in a stop-valve admitting a greater quantity of air to those reeds requiring same.

Stop-mutes as ordinarily constructed are introduced into sockets through an opening in top over point of tongue, thus preventing the placing of an additional set of reeds, one above the other, which is desirable for many reasons.

Stop-valves are ordinarily made of one piece of wood, covering all reeds connected with same register or registers, and are raised an equal distance (or practically so) from the heel of reed throughout the entire length. This plan works well when stop-valve is wide open; but when slight opening is desired for subdued effects, &c., sufficient air cannot be admitted to reeds in first, fifth, and sixth octaves, which require greater volume, and consequent pressure, than reeds in middle octaves, to respond promptly.

Our improvement in mutes consists in introducing into the mouths of the sockets narrow thin strips of spring-brass, the points of which are depressed upon points of reed-tongues by closing of ordinary (or our improved) stop-valve, thus effectually preventing vibration of tongues until stop-valve is raised, when the spring-mutes instantly return to position at the top of the sockets. The ends of the spring-mutes inside the sockets are covered to prevent rattling, and outer ends are secured to a narrow strip of wood, which is fastened to the action by means of thumb-screws, thus admitting of easy removal when the reeds are to be taken out.

Our improved stop-valve is made of two pieces of wood (instead of one, as heretofore) so connected that the part directly connected with registers will be raised slightly in ad-

vance of and higher than other part, thus admitting to reeds at each end of action a greater volume and pressure of air. The parts can be connected in various ways. We prefer to bevel ends coming together, allowing center part (or part not directly acted upon by register) to overlap end part, (or part directly acted upon by register.)

The improvements are illustrated in accompanying drawing, as follows:

Figure 1 is a sectional view of treble end of action, and Fig. 2 is a front view thereof.

A denotes spring-mute. B denotes socket. The side of upper socket is removed to show mute in position when stop is open, the dotted lines representing it closed. C denotes reed. D indicates stop-valves. In Fig. 2, stop-valves being open, the difference in height of the two parts from heel of reed is shown. E indicates point where connection is made in the two parts of stop-valve. F is strip to which outer ends of spring-mutes are fastened; G, thumb-screw.

We do not claim, broadly, a mute resting on the point of the reed-tongue; neither do we claim a stop-valve arranged to be slightly opened; but

What we do claim, and desire to secure by Letters Patent, is—

1. The spring-mute A, or equivalent, placed in juxtaposition with the reed through the mouth of the socket, substantially as and for purpose set forth.

2. The stop-valve D, constructed in two or more parts, the parts being connected so as to be operated by the same register or registers, arranged substantially as specified, and for the purpose described.

3. In a reed-organ, the combination of spring-mute A, stop-valve D, reeds C, and socket B, all constructed and arranged substantially as and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

J. A. WARREN.  
C. W. COOLIDGE.

Witnesses:

J. E. RICHARDSON,  
JAMES REID.